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BEFORE THE

Federal Communications Commission

WASHINGTON, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the Matter of	)	
	)	
Replacement of Part 90 by Part 88 to Revise the Private Land Mobile Radio Services and Modify the Policies Governing Them	)	PR Docket No. 92-235

To: The Commission

REPLY COMMENTS
OF THE
AMERICAN PETROLEUM INSTITUTE

THE AMERICAN PETROLEUM INSTITUTE

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Dated: July 30, 1993

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SUMMARY

The American Petroleum Institute ("API") continues to support the initiative of the Federal Communications Commission ("Commission") to restructure the frequency bands below 512 MHz and revise the Rules and Regulations governing the Private Land Mobile Radio Services. The API's endorsement of the concept of consolidating the several radio services into a fewer number of pools, however, does not extend to the extreme reduction proposed by the Commission. Alternatively, API recommends creation of an Industrial Safety Service that should include, but not necessarily be limited to, right-of-way companies, such as pipelines, railroads, public utilities, and other industrial users who also employ their systems for essential safety communications. Many right-of-way licensees are required by other federal regulations, for safety considerations, to provide redundant or highly reliable communications to support their operations. Furthermore, the Comments of entities engaged in manufacturing, forestry operations, mining, heavy construction, and similar activities that also involve potentially hazardous conditions generally reflect a rationale to be included in such a category.

The API also supports the provision of competitive frequency coordination services with the understanding that frequency recommendations retain their advisory character. The API notes that many Commentors urged the Commission to establish criteria for frequency coordination certification and to mandate the use of effective data processing techniques.

The API supports the introduction of 12.5 kHz equipment in the UHF and VHF spectrum consistent with the program outlined in the Consensus Plan of the Land Mobile Communications Council ("LMCC"). Regarding the VHF band, the API specifically endorses adoption of Option A described in the LMCC Consensus Plan. The LMCC proposal for using a table format for governing antenna height above average terrain ("HAAT") and transmitter effective radiated power ("ERP") is also supported with the understanding that users having special requirements will be provided an effective means of securing an exception to any general limitations.

The API is opposed to the creation of a VHF innovator block, and once again urges the Commission to seize the opportunity presented in this proceeding to allocate specific VHF channels for emergency response communications.

A majority of Commentors support the API's position on abandoning the innovator shared block proposal.

In view of the broad range of issues examined in this proceeding, the API urges the Commission to seek further comments on controversial issues before concluding this matter even if that process requires adoption of a First Report and Order and Further Notice of Proposed Rule Making.

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I. PRELIMINARY STATEMENT

1. API is a national trade association representing approximately 300 companies involved in all phases of the petroleum and natural gas industries, including exploration, production, refining, marketing, and transportation of petroleum, petroleum products and natural gas. Among its many activities, API acts on behalf of its members as spokesperson before federal and state regulatory agencies. The API Telecommunications Committee is one of the standing committees of the organization's Information Systems Committee. The Telecommunications Committee evaluates and develops responses to state and federal proposals affecting telecommunications facilities used in the oil and gas industries.

2. Reliable two-way land mobile radio is an essential tool in almost every phase of the oil and gas industries. Communications must be maintained during exploration activities for the direction of personnel and equipment, as well as for telemetering geophysical data. Drilling operations, by their very nature, involve hazards that can be minimized with reliable two-way radio communications. After production is established, mobile radio continues to play a critical role in providing communications for the

management of production sites where careful supervision must be maintained over the operation of valves, pumps, compressors and separation equipment. Operation of the extensive pipeline gathering systems and long-distance, crude, petroleum products and natural gas pipelines would not be possible without reliable mobile radio communications. These same types of reliable communications are absolutely necessary in petroleum refineries where the safety of personnel demands clear channels of communication. Even in the marketing and distribution of these energy sources, mobile radio continues to play an important role in the transfer of gas at city gates, and the loading and delivery by rail and tank trucks of refined petroleum products to industrial, commercial and residential customers.

3. The petroleum and natural gas industries were pioneers in the use of two-way mobile radio for industrial applications. In recent years, some two-way mobile radio communications have been served by other than the traditional private system. Even though use of private systems may be supplemented with cellular and Specialized Mobile Radio ("SMR") systems, where those services are available, there remains a very critical requirement for privately-owned and operated two-way mobile radio systems.

These energy industries also expect to be users of new personal communication systems in areas where these services

introduction in the PLMRS of digital equipment, and the ultimate rechannelization of the frequency bands 150-174 MHz and 450-512 MHz, as well as consolidation of the multiplicity of radio services into fewer categories in the Comments it submitted in this proceeding. The API remains committed to a systematic and thorough examination of the issues as evidenced by the instant filing. The API is most appreciative of the tremendous effort undertaken by the Commission to develop the proposed changes advanced in this proceeding.

5. The API reiterates that it supports, in large part, adoption of the underlying changes proposed by the Commission. It remains concerned that the proposed equipment transition plan advanced by the Commission is too ambitious and could require the premature and unnecessary

6. Concern remains that sufficient consideration has not been given to the optimum number and structure of the proposed service pools. The API finds disquieting the proposal to arbitrarily restrict antenna height above average terrain ("HAAT") and transmitter effective radiated power ("ERP"). Although the goal of facilitating greater frequency reuse is commendable, the proposal fails to adequately consider all of the unique requirements of users in the oil and gas industries. There are other elements of the Commission's proposal that require closer examination and refinement; and, accordingly, the American Petroleum Institute is pleased to submit these Reply Comments.

II. REPLY COMMENTS

A. The Commission Should Designate a Fifth User Pool to Include Services with Special Safety Communication Requirements

7. API, along with the vast majority of commentors who addressed the pooling issue, support some consolidation of the nineteen services.[3/] However, the proposal for only

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3/ See generally, American Automobile Association ("AAA") at 10; Ericsson GE Mobile Communications, Inc. ("Ericsson GE") at 22; Joint Comments of the Industrial

(continued...)

three specific pools -- Public Safety Radio Service, Non-Commercial Radio Service, and Specialized Mobile Radio Service -- and a fourth General Category pool was uniformly criticized as being too inflexible and unresponsive to the needs of many industrial services which, due to critical safety factors, require "flawless" telecommunications.

8. These non-public entities with special safety communication needs offered a menagerie of alternatives to the Commission's proposal. American Association of Railroads ("AAR"), for example, simply opposed the pooling proposal, but argued that, if pooling is to occur, the railroad industry must be kept isolated in its own pool due to "unique" safety and operational concerns.4/ However,

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3/(...continued)
Telecommunications Association, Inc., Council of Independent Communications Suppliers, and Telephone Maintenance Frequency Advisory Committee ("Joint Commentors") at 22; MCI Telecommunications Corporation ("MCI") at 2; National Association of Business and Educational Radio, Inc. ("NABER") at iv; Utilities Telecommunications Council ("UTC") at 9-10; Association for Maximum Service Television, Inc. ("MSTV") at 6-7; PowerSpectrum, Inc. ("PSI") at 8; Uniden America Corporation ("Uniden") at 7.

4/ AAR at 7-9, 14, 16-17.

> The railroad industry also is unique among PLMR users because of the critical safety functions its land mobile radio facilities serve. The simple fact that railroad operations involve movement of heavy equipment, sometimes carrying passengers and/or dangerous commodities, at high speeds highlights the
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> (continued...)

most of the alternatives proposed by other Commentors favor a five or six pool complement where an extra pool would be designated for those entities having a high level of "safety" related communications.5/ Logically, these similar concerns support the creation of a pool which contains compatible services and users.

9. The API certainly recognizes the serious safety concerns of the railroad industry. However, the API believes that the concerns of nationwide petroleum and natural gas pipeline operators, as well as other industrial organizations that constitute our nation's infrastructure

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4/(...continued)
serious nature of the railroads' safety concerns.

AAR at 8-9.

5/ See, Coalition of Industrial and Land Transportation Land Mobile Radio Users: Manufacturers Radio Frequency Advisory Committee, Inc., Forest Industries Telecommunications, American Trucking Associations, Inc., and International Taxicab and Livery Association ("Coalition") at 13-14; The Coastal Corporation ("Coastal") at 5; Joint Commentors at 22; NABER at 25-26; UTC at 9-10; The E.F. Johnson Company ("E.F. Johnson") at 18. See also International Municipal Signal Association, International Association of Fire Chiefs, Inc. and National Association of State Emergency Medical Service Directors ("IMSA/IAFC/NASEMSD") which supports retention of discrete public safety services. IMSA/IAFC/NASEMSD at 8.

clearly reveal that other services also have crucial safety of life and preservation of property responsibilities.[6/] The solution to meeting their needs would be to implement an Industrial Safety Service pool, similar to the "Private Industrial Service" pool proposed by ITA, which would include the railroads, pipelines, utilities and other essential industrial services.[7/]

B. The Exclusive Use Overlay Plan Requires Increased Flexibility

10. Although continuing to designate the spectrum below 512 MHz for shared systems, the FCC proposed that users who meet mobile channel loading standards be eligible for exclusive use of a channel. If the channel is already shared with other users, the proposal provides that further licensing of the channel may be frozen. This concept was labeled the Exclusive Use Overlay ("EUO") option. API generally supports implementation of the EUO proposal, but believes that eligibility requirements should be more flexible and not solely based on mobile unit loading. Additionally, API recommended that the Commission grant

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6/ API at 6-7.

7/ ITA at 23.

waivers of its EUO for public safety and emergency services.[8]

11. While there is general support for the adoption of an EUO plan, the endorsement is conditioned on implementing necessary improvements.[9] The suggested improvements fall into three main categories:

(a) The mobile loading requirements are too inflexible and should not serve as the only eligibility standard;

(b) There should be waivers for entities providing public safety and emergency services; and,

(c) The exclusive areas offered should be based more on the contour needs of the user and not on the static 50-mile radius proposed by the Commission. The Commission's proposal does not account for rural and right-of-way systems.

8/ API at 11, 35.

9/ See, AAA at 28-29; GEC-Marconi Communications, Ltd. ("GEC-Marconi") at 2; PSI at 7; SEA, Inc. ("SEA") at 6; Mitchell Energy & Development Corp. ("Mitchell") at 5; E.F. Johnson at 15.

12. The API supports adoption of the Exclusive Use Overlay ("EUO") concept. The Commission's proposal contemplates the grant of exclusivity within a 50-mile radius. However, exclusivity should be granted for a designed system regardless of whether it is for limited refinery areas, or along a 1,500-mile pipeline right-of-way. It cannot be over emphasized that mobile radio systems used in the petroleum and natural gas industries do not necessarily fit conventional patterns. It would also be desirable that the channel loading requirements for "rural" systems (20 mobile units) be waived for those applicants and licensees demonstrating a need for exclusivity based on safety considerations. The API is concerned that its members continue to have reliable communications to meet emergency or potentially hazardous situations in exploration, production, and pipeline operations in rural areas where mobile loading, alone, may not justify EUO authority. Establishment of the Industrial Safety Service, as recommended in API's initial Comments, would provide a vehicle to establish appropriate criteria for those users having special safety responsibilities.

13. Generally speaking, the EUO proposal relies too heavily on the use of mobile loading standards to ensure efficient use of the radio spectrum. This measure is not

necessarily an accurate or appropriate gauge to use for exclusivity determinations. The purpose for which the system is used, traffic volumes, actual coverage areas, and system geographic location are equally important criteria. While realizing that a mobile transmitter count provides a convenient measure for the Commission's purposes, the API urges that the rule be structured in such a manner as to provide exceptions based on these other important considerations.

C. Standard Operating Guidelines and a Centralized, Accessible Data Base Must Be Created Prior to Opening the Frequency Coordination Process to Competition

14. Most certified coordinators are closely related to a particular radio service. The Commission has suggested that, after pooling occurs, the coordinators will benefit from the opportunity to provide their services to a much larger number of channels. The agency has also suggested that users will be provided with greater choice when selecting coordination services. The API generally supports the Commission's proposal, but notes that guidelines and a standard data schema should be established. The API has

also emphasized that frequency recommendations must retain their advisory character.10/

15. Commentors opposed to opening frequency coordination to market forces cited the unique level of knowledge and experience held by existing coordinators. These parties implied that other coordinators would not be able to properly coordinate frequencies in their specific service.11/ Those supporting the FCC's proposal, including the API, did so cautiously, voicing concerns that standards and freely accessible frequency databases must be imposed to avoid, for example, the deleterious effects of an environment where "frequency shopping" concerns outweigh the duty to provide quality coordination services.12/

10/ API at 15-16.

11/ "Clearly the public interest -- and Congressional objectives -- would not be served by the adoption of policies which, in effect, cast aside the expertise of the well-established and well-functioning coordinator system -- expertise which will be especially valuable in facilitating the introduction of new technologies in the private land mobile bands." Coalition at 13. See also, AAR at 6, 15. Additionally, Associated Public-Safety Communications Officers, Inc. ("APCO") and the Coalition specifically mentioned that public safety may be jeopardized by disturbing the current coordinator system. Associated Public-Safety Communications Officers, Inc. ("APCO") at 32, 35; Coalition at 12. Relatedly, IMSA/IAFC/NASEMSD support retaining recognized frequency coordinators for certain discrete public safety services. IMSA/IAFC/NASEMSD at 13.

12/ UTC at 11-13. See also, Joint Commentors at 25-26.

16. The maintenance of accurate and reliable frequency coordination data bases will be essential as existing users move to narrowband assignments and new licensees commence operation on the newly-created channels -- particularly in congested areas. In light of the Commission's limited resources, as well as the coordinators' general familiarity with user operating techniques, preferences and trends, it is generally felt that some frequency coordinators may be uniquely positioned to make a valuable contribution in the transition to narrowband operations. On the other hand, in less congested areas where there is truly no technical coordination to be performed, the availability of an accurate Commission data base could permit direct submission to the Commission without formal frequency coordination.

17. The Commission's proposal to permit applicants to use any certified frequency coordinator raises several issues. The likelihood of coordinators using multiple, independent data bases that may not reflect the same information could result in cases of serious interference. There is also some fear that "coordinator shopping" will develop in instances where an initial inquiry elicits an unsatisfactory response, and the applicant moves on to a different coordinator. The prospect of having a choice in

frequency coordination services, however, is appealing; and the API generally supports the adoption of rules that will facilitate the use of more than one coordinator for each of the pools. It is essential, however, that frequency coordinators fully cooperate with one another to insure that conflicting recommendations are not made by two or more organizations.

18. In order to provide the greatest degree of flexibility and data portability between coordinators, API believes that the Commission should strongly encourage and actively facilitate the development of a standard data base schema to be used by all coordinators with their respective data bases. Industry development of such a standard will assure a data structure meaningful to all concerned. Issues like the necessary synchronization of data bases between coordinators and the Commission could be addressed by an industry panel. Without a standard data base schema, the sharing of information between organizations, or quality control, will be unnecessarily cumbersome.

19. The API emphasizes that the role of the coordinator should continue to be strictly "advisory", with the Commission remaining responsible for making final determinations on requests for any deviation from its

regulations. There is concern in the API membership that most coordinators simply do not have the operational background to make system design determinations that must continue to be the province of applicants who have the responsibility for the safe and efficient operation of oil and gas exploration, production, refining, and pipeline telecommunication systems.

D. The Innovator Shared Block Proposal Should Not Be Implemented

20. The Commission proposed creating a new public mobile service on approximately every third channel between 150 MHz and 162 MHz. Such service, the Commission felt, would promote new technologies and techniques in addition to the benefits of offering wide area coverage and more efficient spectrum usage. The API adamantly opposes this proposal.[13/] The vast majority of commentors joined the API with the consensus being that the proposal is inherently

mobile radio users a full one-third of the refarmed VHF spectrum.14/ Due to these fatal flaws, the API submits the proposal should be abandoned.

E. A Reasonable and Financially Prudent System Must Be Designed for Mitigating the Negative Effects of the Onerous Cost of Mandatory Equipment Retrofitting and Replacement

21. The Commission stated that it is working to mitigate the cost and equipment burdens the new rules may impose on users. API cautioned the FCC that the cost of retrofitting systems are onerous, and that the agency needs to more fully consider equipment interoperability concerns.15/

22. The commentors widely noted that the FCC's HAAT/ERP and narrowband proposals, if effected as proposed in the NPRM, would be tremendously expensive and burdensome

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14/ "Significantly, the plan to take one out of three narrowband channels for this purpose would be counterproductive in that it would make it impossible to group together three or more adjacent channels that may be necessary to operate spectrally efficient digital systems requiring relatively wider channels." LMCC at 23-24. See also, American Mobile Radio Association, Inc. ("AMRA") at 7-8; American Trucking Associations, Inc. ("ATA") at 16; Coalition at 25-26; Coastal at 10; Joint Commentors at 19, 28; NABER at 29; UTC at 28-29.

15/ API at 20-22.

to implement. Regarding narrowband, a significant majority pleaded to the FCC to slow down the transition period in order to allow for a proper amount of time to amortize existing equipment before it becomes obsolete.16/ Further, commentors noted that the FCC was incorrect in assuming that all current equipment could be inexpensively adjusted to a narrowband channel with a "screwdriver" and then effectively operated.17/ The commentors cited numerous technical problems with equipment which has been adjusted to narrowband, but does not operate as a "true" narrowband system.18/

16/ Nippon Telegraph and Telephone Corporation ("NTT") at 6-9; City of Colorado Springs, Colorado ("Colorado Springs") at 4-6; UTC at 7, 34; NABER at 9; Motorola, Inc. ("Motorola") at 2, 24, 27; APCO at 20.

17/ "The Commission should recognize the total cost involved and treat the conversion to 12.5 kHz bandwidth as an equipment replacement step, rather than the simple "screwdriver adjustment" previously envisioned by preliminary comments." Alarm Industry Communications Committee ("AICC") at 5-6. See also, Ericsson GE at 5; AMRA at 3, n.1.

18/ Of particular relevance to this proceeding is APCO's

23. Finally, it was observed that rural areas, which do not necessarily experience spectrum congestion, should not be subject to the extremely expensive and burdensome retrofitting solutions outlined by the FCC in the NPRM.[19] The API supports adoption of a more relaxed transition schedule for rural regions than urban and suburban areas.

F. LMCC's Concept of a Safe Harbor Table for HAAT/ERP Restrictions Requires Some Adjustments

24. The FCC proposed new restrictions on antenna height and transmitter effective radiated power. API opposes implementation of the Commission's proposal because it is too restrictive. The API supports adoption of the

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18/(...continued)
meet the Project 25 standard. This standard, which is nearing completion, will provide specifications as to access method, modulation, data rate, trunking and vocoders. However . . . APCO and other Project 25 participants are concerned that the FCC's proposals in this proceeding would undermine the Project 25 standard and its goal of creating competitive markets for interoperable public safety radio equipment. (Emphasis added).

APCO at 1-2. See also, Motorola at 19-29; Ericsson GE at 4-18.

19/ IMSA/IAFC/NASEMSD noted that licensees in sparsely populated areas should not be forced to retrofit their systems unless those systems were interfering with narrowband licensees. IMSA/IAFC/NASEMSD at 15-16; See generally, National Coal Association ("NCA") at 2.

more flexible alternative advanced by LMCC.20/ The HAAT/ERP restrictions proposed in the NPRM were not embraced by the commentors, a vast majority of whom directly opposed adoption of the Commission-proposed limitations.21/ The complaints regarding the Commission's proposal fall into four broad categories:

- There will be no "saved spectrum" because entities which are forced to reduce HAAT or ERP will erect additional transmitters to operate at the reduced levels to meet their geographic coverage needs.

- The cost involved in purchasing and erecting new transmitters in order to cover service areas is unjustifiable.

- The restrictions greatly hinder entities which provide critical public safety services.

20/ API at 24.

21/ AAR at 36-38; Motorola at 29-32; AAA at 15-18; AICC at 24-26; APCO at 8; MCI at 3; NABER at 26; UTC at 40; Telecommunications Industry Association ("TIA") at 18; NCA at 1-2; Colorado Springs at 5; Mitchell at 5; Southern California Edison Company ("SCE") at 8-9; Southern California Gas Company ("SCG") at 21-22.